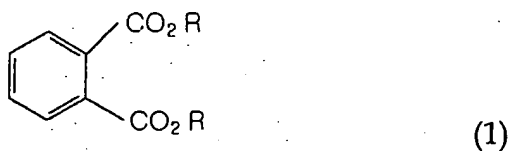


CLAIMS

What is claimed is:

1. A facilitated transport membrane for olefin/paraffin separation, which
5 comprises a polymer, a silver salt, and a phthalate represented by the following formula (1):



wherein R denotes an alkyl group of 2 to 8 carbon atoms or a phenyl group.

- 10 2. The membrane of claim 1, wherein said polymer contains electrondonating heteroatoms in the polymer structure.

3. The membrane of claim 2, wherein said polymer is selected from the group consisting of polyvinylpyrrolidone (PVP), poly(2-ethyl-2-oxazoline),
15 polyvinylmethylketone, polyvinylformal, polyvinylacetate, cellulose acetate (CA), cellulose acetate butyrate (CAB), polyacrylate, polymethylmethacrylate (PMMA) and polyacrylic acid.

4. The membrane of claim 1, wherein the molar ratio of said silver salt to the
20 repeating unit of the polymer is in the range of 0.5 - 3.

5. The membrane of claim 1, wherein said silver salt is selected from the group consisting of AgBF_4 , AgPF_6 , AgSO_3CF_3 , AgClO_4 and AgSbF_6 .

6. The membrane of claim 1, wherein the loading of said phthalate is in the range 0.05 - 10 wt% with respect to the polymer.

5 7. A method for preparing a facilitated transport membrane for olefin/paraffin separation comprising steps of:

successively dissolving a polymer, a silver salt and a phthalate compound, in a solvent, so as to form a homogeneous solution; and

coating said solution onto a support substrate; and drying the coated support
10 in a condition free from light and oxygen.

8. The method of claim 7, wherein said solvent is alcohol of 1 to 4 carbon atoms, or tetrahydrofuran (THF).

15 9. The method of Claim 7, wherein said support substrate is microporous.

10. The method of Claim 7, wherein said solution is coated onto a glass plate without using the support substrate, dried and then removed from the glass plate.

20

25